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COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS

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FORESTRY

Excerpts from 1922 Annual Reports
of State and County
Extension Agents.

This circular is one of a series issued
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Brief No. 4

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June, 1923.

CONTRACTUAL EXPANSION FOR INTEGRATION IN THE SERVICES

INVESTIGATIVE
INVESTIGATION, DETERMINATION
AND ESTABLISHMENT OF ANNUAL
BUDGETS

INVESTIGATION, DETERMINATION
AND ESTABLISHMENT OF ANNUAL
BUDGETS

GENERAL

INVESTIGATION, DETERMINATION
AND ESTABLISHMENT OF ANNUAL
BUDGETS

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FORESTRY*

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of State and County Extension Agents.

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Colorado

Tree planting campaign: - The campaign was chiefly carried on by the agricultural committee of the Colorado Springs Chamber of Commerce in an effort to beautify and make more valuable the treeless prairie of the county.

Methods: - W. J. Morrill, State Forester, met with the agricultural committee and representatives of the farm bureau, advised them concerning varieties and methods of planting, and, by the use of slides, gave a lecture which awakened considerable enthusiasm. The committee in charge scheduled five meetings in the communities of Drennan, Calhan, Falcon, Hanover, and Edison. The meetings were preceded by a great deal of publicity. At each meeting the entire agricultural committee and other interested people of the city, together with some of the county farm bureau officials and the county agent, furnished the program. Mr. Morrill's illustrated lecture was shown, representatives of the Forest Service of the United States Department of Agriculture spoke, local speakers from town and county expressed their ideas, and a glee club, specially trained for the occasion, furnished music. At the close of the meeting orders were taken for trees from the State Nursery, and literature was distributed relative to the planting and care of trees.

Results: - We know that more than 10,000 trees were ordered from the State Forester as a result of this campaign. There were many other trees planted in the communities where meetings were held, so we are safe in estimating from 15,000 to 20,000 trees planted as a result of the campaign. - J. C. Hale, County Agent, Colorado Springs, El Paso County.

* No attempt is made to cite all references to forestry extension work in this circular. Only selected extracts showing typical methods employed and results secured in a number of States are included. Owing to differences in terminology used in the various States and to other local conditions, the information contained in this brief should be reviewed by the State subject-matter specialist concerned before incorporating any part of it in the extension plans of that State.

Forestry clubs (boys):- The forestry club is a new one this year. It was started to give children living in the forest sections a better knowledge of forest management. One club was started at Crestone with 7 members. The forest ranger and the county agent acted as leaders. These boys took up the study of fire protection, estimating timber, tree identification, and log scaling at both county and State fairs. A great deal of interest was shown and this club plans to increase its number next year.

The Crestone forestry team of Saguache County gave one of the best demonstrations ever given in Colorado at the State fair. The demonstration was repeated so that everyone in camp might see it. It was a new demonstration and gave impetus to the forming of forestry clubs. The two things brought out in the demonstration were means of identification of trees found in the timber of the boys' section, and the importance of cleaning camp so as to prevent fire in the forests. They brought with them from the hills, sprigs of quaking aspen, alder, willow, mountain maple, wild cherry, and spruce of different varieties. Each was taken in turn and its characteristics and habits of growth were explained. The boys quoted statistics on timber stands and cuttings in the United States to show that five times as much timber is used in this country now as is cut each year and that the country, which 30 years ago had the densest growth of timber known, is now unable to supply its own need. - Walter R. Freeman, Assistant State Club Leader, Fort Collins.

Connecticut

White pine blister rust. The United States Department of Agriculture has placed a forester in this county to supervise the work of eradicating white pine blister rust. The forester is cooperating with us, the State forestry officials, and the local committee appointed for that purpose. A specially appointed forestry committee has cooperated in Cornwallis, raising \$2000 to assist in the eradication work, and expect, with the help of a small appropriation, to complete the work next year. A special committee in Salisbury has agreed to assist in the town to the extent of \$3500 and North Canaan has voted to appropriate \$500 for the work in that town. Mr. Round, the forester, has visited 134 pine owners and has given advice and assistance on control measures. He has also made exhibits at fairs, placed exhibits in store windows, held five meetings, and done other publicity work. - A. G. Davis, County Agent, Torrington, Litchfield County.

Iowa

It was in order to help bring about the intelligent care and planting of wood-lots, and the reforestation of land suitable for timber that extension work in forestry was established. A total of 2,415 people have been reached in 37 counties by direct contact through 23 conferences and interviews. A total of 27 demonstrations, and 17 meetings and lectures, outside of demonstrations, were given. Four circulars on general and specific problems have been prepared and sent out. Bulletins on shelterbelt planting and preservation of posts and timbers are now being printed. Much publicity material has been furnished the press and this material has received wide circulation. Altogether an excellent start has been made in the development of constructive policies concerning the timber lands and shelterbelts of the State of Iowa.

Wood-lot management -- Forestation - Definite demonstrations on wood-lot management have been given in Ida and Des Moines Counties. Demonstration plantings have been established in Lucas, Story, Tama, Delaware, Hardin and Monona Counties. These demonstrations have been established with the extension service, the experiment station, and the farm bureau cooperating. A total of 16,400 trees have been set out.

Wood preservation - Creosoting demonstrations were carried on in five different counties. The problem at present with wood preservation appears to be as much one of demonstrating how it can be done at a reasonable cost as one of demonstrating results that can be obtained. The ordinary soft woods like willow and maple can be made to last from 20 to 30 years by creosoting. There is no question but what it is more economic to treat posts than not to treat them provided the creosote is purchased in quantity lots. Moreover, where posts are creosoted there is a great saving in labor due to building and a great saving in losses due to rotten posts.

Shelterbelts - Demonstration plantings have been established in Adair, Warren, Story, and Polk Counties. A total of 1,167 trees were set out in demonstration shelterbelt plantings. - R. K. Bliss, Director of Extension Service, Iowa State College of Agriculture and Mechanic Arts, Ames.

Soaking posts in creosote:- This project was accepted because there were many inquiries in regard to treating fence posts with creosote. Dr. Breid of the Indian Sanatorium was interested and wanted to install a tank for this work. He arranged for the tank, creosote, and posts, while his farmer made the installation. The demonstration was held on the reservation under the supervision of Mr. Bode, of the extension service. The entire county was notified of the demonstration but on account of the bad roads, only the southern half took the advantage offered. This work was carried on during two days and a large number of posts were treated. It was found that a post when entirely submerged would absorb the creosote one-eighth to one-fourth inch deep and would hold nearly one gallon of creosote. This treatment makes a post good for 25 years or from 15 to 20 years longer than its natural life. To determine this comparison more accurately some of the posts will be set along side of some untreated posts. above

Besides the described demonstration, Mr. Bode visited several farms where they were having trouble with planting, cultivating, and disease in their farm woodlots, and made recommendations which are being carried out. Mr. Bode has also been watching the growth and development of some new plantings made by Dr. Breid on the reservation. These plantings are growing rapidly and under the direction of the forestry department and extension service they are showing what proper methods of handling will do to make a waste piece of land produce some good timber. - J. W. Pendry, County Agent, Tama County.

Maryland

The timber interests in this county have been sadly neglected and left almost entirely to the outside buyers to come in and take from the county this valuable product, loblolly pine, for piles and mine props and leave in their wake devastation and ruin that is almost unpardonable. With these facts staring the future forest interests of the county in the face, the subject was discussed with Mr. Besley, the State Forester, and some of the largest timber owners. It was decided to conduct a campaign and endeavor to better the exist-

ing conditions. The first step of the campaign was to circulate a well thought out letter and newspaper articles from the county agent's office, setting forth the conditions as they exist and offering assistance wherever possible. A few weeks later another letter of a somewhat personal nature was sent to a number of the most prominent owners of forest lands offering assistance in every possible way. This was the means of bringing 18 wood-lot owners to the office to discuss better forestry methods. Arrangements were made with the forestry department to send Mr. Cope, Assistant State Forester, to spend a week in the county to visit these 18 men and confer with them in the management of their wood-lots, and if possible to establish some permanent demonstrations along roads and public highways to be used as an object lesson. During Mr. Cope's visit all of these men were called upon and assistance given them. Four permanent demonstrations have been staged where five acre tracts, recently cut over, will be reset to loblolly pine. These demonstrations have been arranged in different sections of the county, so as to be educational in nature. A number of thinning demonstrations have also been conducted and systematic notes will be taken on the growth of the stands. - E. I. Oswald, County Agent, Snow Hill, Worcester County.

Minnesota

Windbreaks - A windbreak demonstration has been established in this county the last two years. This work is being carried on with the State Forestry Department at Cloquet, Minnesota. The inspector was around for two days last summer and he and I made a thorough inspection of the cooperative windbreak. We also added two new ones, making a total of 21 for this county. These windbreaks are located on a special map, and the names of the cooperators are checked. About 70 per cent of the hardwoods have lived and are doing well, while 80 per cent of the soft woods have survived. This last year has been especially hard on trees in this vicinity because of the hot weather, therefore a great number of replacements were necessary. This county has more windbreaks in cooperation with the State than any other county in Minnesota. The majority of the cooperators are taking very good care of the trees and are following the methods advised by the State forestry department. - A. A. Kosmoski, County Agent, Ivanhoe, Lincoln County.

Shelterbelts - The shelterbelt demonstration plots were carried on again during 1922. These demonstration plots are put out through the cooperation of the county agent and the State forestry department for the purpose of introducing conifers to this prairie region of the State. In general the shelterbelts consist of about six rows of hardwood trees outside of the conifers to give a quick, rapid growth and protection to the buildings within a very few years. Although demonstrations of this kind have been carried on for only three years it is evident that evergreens can be successfully grown here, provided the grower will give them good care. The plantations of J. W. Rabeneau and Simon Lindquist show up best of any at this time, which condition is due entirely to the care they have been given. - F. F. Moore, County Agent, Wheaton, Traverse County.

Montana

Shelterbelts - There are some very beautiful cooperative shelterbelts in the county and they certainly add greatly to the landscape of the community and of the homesteads. They stand out on the prairie as a challenge to the farmers to get busy and help beautify their homesteads and the landscape of the community.

Results:- 57 shelterbelts up to and including 1922

14 started since 1922

5 more signed up for 1923.

Methods:- The Mandan Government Station gives each county five applications for cooperative shelterbelts each year to be placed with the best farmers of the county wanting them. Valley County has always had double its quota and an opportunity is never lost to get a good farmer talked into the notion of a shelterbelt. - M. E. Stebbins, Glasgow, Valley County.

New Hampshire

Since August 1, we have had in this county a blister rust agent, who has taken a very active stand on blister rust and forestry. He has attended numerous meetings with the county agent and we have cooperated all along the line in the work. The agent attended our planning meetings and forestry was worked out into our regular program of work so that a definite forestry program has been formulated for 1923.

Forestry work done in 1922:

1. Meetings and demonstrations

Public wood-lot field demonstrations 10

Public blister rust field demonstrations 1

Public blister rust talks 2

2. Wood-lot demonstrations held - To the county agent's knowledge the first wood-lot demonstration to be held in the county was held in Greenland by L. N. Watson, field assistant and the State forestry department. Both a pine forest and a hardwood-lot were visited and an outline of proper thinning and care of such explained to the farmers present. Besides the above demonstrations, nine others, arranged by the blister rust agent, have been conducted, as called for in the 1923 program.

At Derry and Londonberry the State forester and the State supervisor of blister rust were present. The assistant forester attended the Windham and Auburn meetings. The other four meetings were conducted by the county blister rust agent. The meetings consisted of a talk on blister rust and a practical talk on wood-lot management.

3. Blister rust demonstration - On September 21, without doubt, the largest field demonstration ever held in the county was held in South Deerfield. This demonstration involved an excellent practical demonstration in blister rust and what it will do to white pine, and a talk on forest reproduction by the state forester. The Deerfield area represents one of the worst infected areas in the State. - J. A. Purington, County Agent, Exeter, Rockingham County.

New York

Perhaps the best index which we have of the growth of the forestry project is summed up in the findings of the State Conservation Commission which

points to the fact that a larger number of seedling trees are being purchased than ever before. The following is a quotation from the Herkimer County report dealing with a type of cooperation which is being secured in that section of the State:

"Reforestation: American Legion Project. - 45,000 white pine seedlings were planted by the Herkimer Post of the American Legion in May. This idea was organized by the county agent, and carried out by John Henderson, who is largely responsible for the success of the undertaking.

"Reforestation on the western side of the Adirondacks: - Since the reforestation problem includes not only north central Herkimer County, but also parts of Oneida, Lewis and Jefferson Counties, cooperation has been secured with these other county farm bureaus in carrying on the general program of reforestation. A nursery has been located at Lowville to supply trees for this side of the Adirondacks. A tentative survey is being made of forestry conditions in Herkimer County, especially in the north central portion around the towns of Ohio and Salisbury, with the idea of possibly getting organized effort under way locally to boost reforestation. A special meeting was held at White Lake which was attended by about 50 people from Lewis, Oneida and Herkimer counties. The purpose of the meeting was to give those present an opportunity of actually seeing trees planted, trees that were planted last spring, some that had been growing 5 years, others that had been planted 10 and 11 years, and finally some trees that were 45 and 50 years old. The importance of white pine blister rust was also explained at this meeting. There seems to be very little danger from this disease on the western side of the Adirondacks and that is being controlled with comparative ease."

White pine blister rust: The white pine blister rust campaign has been conducted in a number of counties of the State in cooperation with the Bureau of Plant Industry, United States Department of Agriculture. The particular point which may differ from the work in other States is the fact that a definite written agreement was worked out between the County farm bureau, the Conservation Commission, and the State College of Agriculture. - J. C. Coryell, County Agent Leader, New York State College of Agriculture, Ithaca.

The ultimate goal in forestry is to make the farm wood-lots permanently and profitably productive, to secure the reforestation with desirable forest trees of open lands not now occupied with agricultural crops or grazing, and to aid in stimulating an interest in forest practice among land owners within the State who are not farmers. For each of the separate sub-projects already listed the goals may be summarized as follows:

Forest planting--to stimulate the increased planting of forest trees on otherwise waste land. This is done by lecture, letter, press notice, bulletin, and, above all, by example. Owing to the wide field to be covered, and the shortness of the planting season it is impossible to make any statement of the number of trees planted as a result of our influence. Without doubt, the work done by this department was largely influential in the distribution, by the Conservation Commission, of 3,687,360 forest trees during the spring of 1922. No record is available of the number of trees distributed for fall planting. It is worth noting that more trees were distributed during the season of 1922 than at any time in the history of the State. The goal has not been reached, however, for the number of trees mentioned will cover scarcely more than 3000 acres. At this rate it would take more than 600 years to plant up the existing empire of waste land in the State.

Recognizing that forestry is more than forest planting, considerable stress has been laid upon the "improvement and maintenance of the farm wood-lot." The goal here is to get all farm woodlands under some plan of forest management with the idea of permanently increasing the annual per acre yield from perhaps 25 board feet to somewhere between 300 and 500 board feet, depending upon the species and local conditions. To date a few demonstration wood-lots have been established in various parts of the State, but very little in the nature of conclusive facts has been established.

In the maintenance and improvement of our sugar maple groves we aim to show by the practice of silviculture within the grove the best methods of managing a sugar maple bush. All that has been done so far is to get cost figures from some producers. In the control of white pine blister rust the aim is to make safe for the growing of white pine all areas where white pine is of a paramount importance.

Lectures arranged, preferably by the county agricultural agent, in the region more or less interested in forestry have proved very effective. The blister rust work brought in a desirable innovation in that the Conservation Commission provided a motor driven moving picture machine such as could be set up in any school, hall, or church. Four reels explaining phases of forestry and wild life were shown, and a lecture was given. As a result of this series of meetings I became convinced of a keen desire on the part of the rural people, not only for instruction but for entertainment as well.

In stimulating a desire for forest planting or wood-lot development, I find nothing quite so satisfactory as the demonstration arranged as a field trip. It is especially desirable in plantations where a succession of work has been carried on over a period of years. In such a place the people have a chance to observe the growth of the trees from the unpromising plantation in the grass to the stimulating sight of vigorously growing trees.

The success of the Carthage field trip demonstration showing the results of forest planting is due very largely to the active work of the county agent. He set the date, sent out the publicity, and arranged that certain leading spirits of the county, not farm bureau members, should be present. We had talked over the general plan and carried on considerable correspondence concerning the tour, but my active participation did not begin until the morning preceding the demonstration. On that day, August 21, 1922, we went over the ground to be covered, planned a few of the details, and talked with some of the men who were to serve as local leaders.

The following morning at 9 o'clock, the people began to gather at Watertown in their cars. We started on schedule time, and our first stop was made at a new and most unpromising young plantation beside the Black River. Next we stopped at a maple grove for a few minutes, and then picking up additional members to the party in Carthage, we proceeded through Croghan to the property of the Carthage Water Works. Near Croghan we left the paved road and proceeded through a desolate country of struggling or wholly abandoned farms, whose misery was broken only by an occasional wood-lot or sugar bush. It was a refreshing change, after plowing through the last stretch of sand to enter the pine plantation where already the trees are beginning to encroach upon the narrow roadway. The party passed through a dense stand of planted Scotch pine, more recently established plantations, and natural hardwood forests before it arrived at the settling basins for the village water supply. By the time we reached the picnic place, at least 70 people were in the party. Immediately after lunch there was a program of speeches during which lumbermen, leaders of

industry, politicians, the county agent, and others spoke on the advantages and possibilities of just such examples of reforestation as we had been privileged to pass through.

On the way out the party stopped to view plantations, which had been established during the previous spring, where the young trees seemed in danger of being smothered out by the competing grass. We then proceeded to increasingly older plantations, and at one point could see over 100 acres of solid green where previously there had been blow sand and sparse grass. As the party came upon the larger trees, standing in rows and beginning to shed their lower branches, the members became steadily more enthusiastic. The secretary of the local Board of Commerce planned a county fair exhibit which should wake the citizens of Watertown to a similar program. The farmers clustered about the leaders to learn where they could get similar trees and how they should set them out.

Outlook - Forest planting and the improvement and maintenance of the farm wood-lot will continue to be the major sub-projects during the coming year. Using the cost of production figures collected the past two years as a basis, I hope to establish at least one demonstration to show methods of improving and maintaining a sugar maple grove. I shall continue to take an active interest in the affairs of the Maple Producers' Cooperative Association, but will leave the marketing of syrup to them. Consequently that phase of the work will be dropped from the schedule, as also will the sub-project dealing with the control of white pine blister rust. - G. H. Collingwood, Forestry Specialist, New York State College of Agriculture, Ithaca.

During the year several conferences have been held with the Black River Regulating Board, the reforestation committee of the Board of Supervisors, J. N. Carlisle, President of the Northern New York Utilities Incorporation, forestry experts from Cornell, the Conservation Committee, and leading farmers of the North Country relative to the problems involved in reforestation.

Twenty-five hundred trees (Norway Spruce) were distributed in lots of 200 each to farmers in several communities to use in demonstration plantings. A forestry tour was carried out, making stops at new plantings of spruce and pine, a sugar bush where rejuvenation was discussed, and the village or municipal forest of Carthage where Scotch pines have been set out yearly since 1913 (1917 excepted.) Approximately 500 acres have been set out and the older trees are now from 15 feet to 20 feet in height and up to six inches in diameter. This tour, participated in by both rural and urban residents, has created much interest.

The forestry committee of the Board of Supervisors has been cooperated with in making studies of the problems involved. The committee has just submitted a report to the Board, which recommends the idea of township and municipal reforesting to the town board and the village boards, and also recommends that the county agent and the member of the Board of Supervisors on the executive committee of the farm bureau act in an advisory capacity to this work which may be carried on as a county or township measure. It is hardly likely that much reforestation will be done by individuals, as it will have to be undertaken by large units. - W. I. Roe, County Agent, Watertown, Jefferson County.

Pennsylvania

Since April 1, 1921, the full time of one man has been devoted to the forestry project. Planting seems to be the entering wedge which lays the foundation for forestry work. Dullness in timber markets probably accounts for a decrease of applications for help in marketing the product of the wood-lot. Thinning and otherwise improving young stands of timber is taking hold slowly, but surely. Already a few demonstrations of this character have been conducted.

Planting - Planting work covers inspection of possible planting sites, assistance in ordering and securing trees for planting, tree-planting demonstrations, and examination of planted areas to obtain a record of the survival and condition of trees. Twelve planting demonstrations were conducted. Assistance was rendered in connection with the planting of approximately 100,000 trees in 30 plantations while the extension service was consulted regarding additional plantings involving 145,000 trees.

Wood-lot management - The work in management consists of examining stands to ascertain their condition, the holding of demonstrations on thinning and other improvements, and conferences on all matters dealing with the improvement of stands. For convenience, all work dealing with the protection against forces destructive to wood-lots and single trees, usually shade trees, is also included in this project. Thirty-four requests for assistance of this character were met.

Marketing - Advice was given in 12 different communities which involved the disposal of between 30,000,000 and 40,000,000 feet of timber, having a value of not less than \$300,000. - M. S. McDowell, Director of Extension Service, Pennsylvania State College, State College.

Some little attention has been attracted to "Little Blair" from those who are interested in the conservation of our timber lands. The county has a forestry committee which in conjunction with the farm bureau conducted three-planting demonstrations of forest lands. These demonstrations were located at McKee, on the J. L. Hartman property, on the John Woodcock farm between Geestown and Canoe Creek, and on the G. S. Watts farm near Henshewtown. In each case the owner gladly cooperated by making no charge for the land. The average high attendance shows there is considerable interest in this matter. Inspections later in the summer showed that there was a survival of from 80 per cent to 90 per cent, which is regarded as very good considering the unfavorable season.

For two weeks during the planting season a special film regarding forestry matters was shown in the moving picture theater of each town in the county. It was estimated that at least 9,500 people saw the film. In 1921, 89,500 trees were planted in Blair County, while in 1922 the number increased to 143,500. - R. B. Dunlap, County Agent, Hollidaysburg, Blair County.

Approximately 30,000 forest trees were distributed to farmers throughout this county. These trees were planted on waste land on the farm that could not be used for pasture or cultivation. Mr. C. R. Anderson, Forester from Pennsylvania State College, gave a demonstration on forest tree planting and invited the boy scouts in the City of Erie to attend and get practical experience. The boys were divided into teams and they planted all of one farmers' trees. During the summer many of these plantings were visited and counts made as to the number surviving. After taking an average for all plantings visited we had a survival of 80 per cent. - R. H. Engle, County Agent, Erie, Erie County.

In April a tree-planting demonstration was held on the farm of H. J. Carpenter at Jersey Shore. Several thousand forest tree seedlings were secured by Mr. Carpenter from the State Forestry Department. Mr. Anderson, Forester from Pennsylvania State College, gave a demonstration of the correct method of healing in young trees and explained how they should be handled from the time shipment is received until they are planted. A demonstration was held in the field to show the best system to use in planting the trees. All of those in attendance were given a chance to take a hand and several rows of trees were planted. Later on in the summer Mr. Anderson and the county agent visited a site on the Seigel farm at Tombs Run and made all plans for the location of another permanent forestry demonstration - W. H. Van Sant, County Agent, Williamsport, Lycoming County.

On June 100,000 seedlings were delivered to Williamsport and 100,000 to Jersey Shore. The trees were delivered in boxes and were to be planted in the same manner as the demonstration trees.

The plan was to plant 100,000 trees in the Williamsport area, 100,000 in the Jersey Shore area, and 100,000 in the Lycoming area. The trees were to be planted in the same manner as the demonstration trees, which were to be planted in the same manner as the demonstration trees.

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